ZLOCHEVSKIY, I.I., glavnyy domenshchik; BERG, I.A.

Improving working conditions in blast-furnace plants. Bezop.truda v prom. 3 no.1:15-16 Ja '59. (MIRA 12:3)

1. Upravleniye metallurgicheskoy promyshlennosti Chelyabinskogo sovnarkhoza (for Zlochevskiy). 2. Starshiy inzhener po tekhnike bezopasnosti upravleniya metallurgicheskoy promyshlennosti chelyabinskogo sovnarkhoza (for Berg).
(Chelyabinsk--Blast furnaces)

ZLOCHEVSKIY, P.M.; ZAL'MUNINA, A.M. (Moskva)

Mechanism of Adams-Stokes seizures. Klin.med. 39 no.5:125-133 My '61. (MIRA 14:5)

1. Iz bol'nitsy No.46 Timiryazevskogo rayona Moskvy (glavnyy vrach N.A. Sharova).
(HEART BLOCK) (ELECTROCARDIOGRAPHY)

36941
S/142/61/004/006/002/017
E192/E382

9,2572

AUTHORS: Samoylenko, V.I. and Zlochevskiy, Ye.M.

TITLE: Theory of dynamic processes in a parametron based on the capacitance of an n-p-junction

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiotekhnika, vol. 4, no. 6, 1961, 640 - 652

TEXT: The system considered is illustrated in Fig. 1 and the solution of the equation describing its operation is based on the asymptotic methods developed by N.N. Bogolyubov and Yu.A. Mitropol'skiy (Asymptotic methods in the theory of non-linear oscillations (Asimptoticheskiye metody v teorii nelineynykh kolebaniy), Gosfizmatizdat, 1958 - Ref. 5). The capacitance C_K in Fig. 1 is the differential capacitance of an n-p junction which can approximately be expressed as:

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Theory of dynamic processes ....

$$C_K = C_O \frac{1}{1 + \frac{1}{2}\frac{U}{E + \varphi_K}} \qquad (4)$$

where $C_O = C_{KO}\sqrt{\frac{\varphi_K}{\varphi_K + E}}$ which represents the capacitance at the operating point,

C_{KO} is the capacitance in the absence of an external voltage,
φ_K is the contact potential difference,
U is the excitation voltage across the capacitance, and
E is the biasing voltage at the operating point.

It is shown that the second approximationto the solution of the

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characteristic equation of the system is given by:

$$\xi = a\cos\left(\frac{\sqrt{}}{2}t + \Theta\right) + \frac{a^2}{6}\cos(\sqrt{}t + 2\Theta) + \frac{\xi_o}{3}\sin(\sqrt{}t - 2\Theta) \qquad (6)$$

where $\xi = U/(E + \varphi_K)$, $\xi_o = U_o/(E + \varphi_K)$, $\delta = r/L$ and $\omega = 1/(\sqrt{LC_o})$. The amplitude α and the phase angle Θ, which are "slowly"-changing functions of time, can be found from the following equations:

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Theory of dynamic processes ....

$$\begin{cases} \dfrac{da}{dt} = -\dfrac{\delta a}{2} + \dfrac{\xi_o \omega^2}{4\nu} a \cos 2\Theta \\ \dfrac{d\Theta}{dt} = \omega - \dfrac{\nu}{2} + \dfrac{3}{8}\dfrac{\omega^2 a^2}{\nu} - \dfrac{\xi_o \omega^2}{4\nu} \sin 2\Theta \end{cases} \quad (7)$$

4

The above equations are analyzed for the steady state, when $d\alpha/dt = d\Theta/dt = 0$ and the results are shown in some graphs. Since Eq. (7) cannot be solved analytically, they are evaluated approximately for a number of special cases by employing the method of numerical integration. It is concluded from the analysis that, unlike in a normal oscillator, the shape and duration of the transient processes in a parametron depend not only on amplitude but also on the phase of the oscillations in the circuit at the instant of applying the pump signal.

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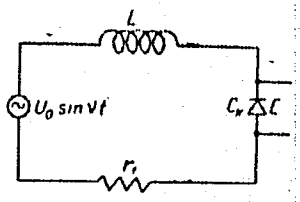
For certain initial conditions the amplitude of the oscillations in the circuit may decrease and later increase. The duration of the transient depends on the initial conditions as well as on the quality factor of the circuit and the amplitude of the pump signal. The duration of the transient can amount to tens and even hundreds of cycles of the pump signal under normal conditions. The duration can be arbitrarily large under certain zero initial conditions. In general, the amplitude and the phase transient is oscillatory. Three stable states can exist in a parametron under certain conditions: absence of oscillations and presence of oscillations with two possible phase states.
There are 9 figures.

ASSOCIATION: Kafedra Moskovskogo aviatsionnogo instituta im. Sergo Ordzhonikidze (Department of the Moscow Aviation Institute im. Sergo Ordzhonikidze)

SUBMITTED: February 2, 1961

Theory of dynamic processes ....

Fig. 1:



Card 6/6

ZLODEYEV, G.A.

ANDREYEV, A.B.; ANTONOV, A.I.; ARAPOV, P.P., BARMASH, A.I., BEDNYAKOVA, A.B.; BENIN, G.S.; BERESNEVICH, V.V.; BERNSHTEYN, S.A.; BITYUTSKOV, V.I.; BLYUMENBERG, V.V.; BONCH-BRUYEVICH, M.D.; BORMOTOV, A.D.; BULGAKOV, N.I.; VEKSLER, B.A.; GAVRILENKO, I.V.; GENDLER, Ye.S., [deceased]; GERLIVANOV, N.A., [deceased]; GIBSHMAN, Ye.Ye.; GOLDOVSKIY, Ye.M.; GORBUNOV, P.P.; GORYAINOV, F.A.; GRINBERG, B.G.; GRYUNER, V.S.; DANOVSKIY, N.F.; DZEVUL'SKIY, V.M., [deceased]; DREMAYLO, P.G.; DYBETS, S.G.; D'YACHENKO, P.F.; DYUHNBAUM, N.S., [deceased]; YEGORCHENKO, B.F. [deceased]; YEL'YASHKEVICH, S.A.; ZHEREBOV, L.P.; ZAVEL'SKIY, A.S.; ZAVEL'SKIY, F.S.; IVANOVSKIY, S.R.; ITKIN, I.M.; KAZHDAN, A.Ya.; KAZHINSKIY, B.B.; KAPLINSKIY, S.V.; KASATKIN, F.S.; KATSAUROV, I.N.; KITAYGORODSKIY, I.I.; KOLESNIKOV, I.F.; KOLOSOV, V.A.; KOMAROV, N.S.; KOTOV, B.I.; LINDE, V.V.; LEBEDEV, N.V.; LEVITSKIY, N.I.; LOKSHIN, Ya.Yu; LUTTSAU, V.K.; MANNERBERGER, A.A.; MIKHAYLOV, V.A.; MIKHAYLOV, N.M.; MURAV'YEV, I.M.; NYDEL'MAN, G.E.; PAVLYSHKOV, L.S.; POLUYANOV, V.A.; POLYAKOV, Ye.S.; POPOV, V.V.; POPOV, N.I.; RAKHLIN, I.Ye., RZHEVSKIY, V.V.; ROZENBERG, G.V.; ROZENTRETER, B.A.; ROKOTYAN, Ye.S.; RUKAVISHNIKOV, V.I.; RUTOVSKIY, B.N. [deceased]; RYVKIN, P.M.; SMIRNOV, A.P.; STEPANOV, G.Yu, STEPANOV, Yu.A.; TARASOV, L.Ya.; TOKAREV, L.I.; USPASSKIY, P.P.; FEDOROV, A.V.; FERE, N.E.; FRENKEL', N.Z.; KHEYFETS, S.Ya.; KHLOPIN, M.I.; KHODOT, V.V.; SHAMSHUR, V.I.; SHAPIRO, A.Ye.; SHATSOV, N.I.; SHISHKINA, N.N.; SHOR, E.R.; SHPICHENETSKIY, Ye.S.; SHPRINK, B.E.; SHTERLING, S.Z.; SHÜTYY, L.R.; SHUKHGAL'TER, L. Ya.; EKVAYS, A.V.;

(Continued on next card)

ANDREYEV, A.B. (continued) .... Card 2.

YAKOVLEV, A.V.; ANDREYEV, Ye.S., retsenzent, redaktor; BEREZHGEYM, B.M., retsenzent, redaktor; BERMAN, L.D., retsenzent, redaktor; BOLTINSKIY, V.N., retsenzent, redaktor; BONCH-BRUYEVICH, V.L., retsenzent, redaktor; VELLER, M.A., retsenzent, redaktor; VINOGRADOV, A.V., retsenzent, redaktor; GUDTSOV, N.T., retsenzent, redaktor; DEGTYAREV, I.L., retsenzent, redaktor; DEM'YANYUK, F.S., retsenzent; redaktor; DOBROSMYSLOV, I.N., retsenzent, redaktor; YELANCHIK, G.M. retsenzent, redaktor; ZHEMOCHKIN, D.N., retsenzent, redaktor; SHURAVCHENKO, A.N., retsenzent, redaktor; ZLOBEVICH, G.A., retsenzent, redaktor; KAPLUNOV, R.P., retsenzent, redaktor; KUSAKOV, M.M., retsenzent, redaktor; LEVINSON, L.Ye., [deceased] retsenzent, redaktor; MALOV, N.N., retsenzent, redaktor; MARKUS, V.A. retsenzent, redaktor; METELITSYN, I.I., retsenzent, redaktor; MIKHAYLOV, S.M., retsenzent; redaktor; OLIVETSKIY, B.A., retsenzent, redaktor; PAVLOV, B.A., retsenzent, redaktor; PANYUKOV, M.P., retsenzent, redaktor; PLAKSIN, I.N., retsenzent, redaktor; RAKOV, K.A. retsenzent, redaktor; RZHAVINSKIY, V.V., retsenzent, redaktor; RINBERG, A.M., retsenzent; redaktor; ROGOVIN, M. Ye., retsenzent, redaktor; RUDENKO, K.G., retsenzent, redaktor; RUTOVSKIY, B.N., [deceased] retsenzent, redaktor; RYZHOV, P.A., retsenzent, redaktor; SAMDOMIRSKIY, V.B., retsenzent, redaktor; SKRAMTAYEV, B.G., retsenzent, redaktor; SOKOV, V.S., retsenzent, redaktor; SOKOLOV, N.S., retsenzent, redaktor; SPIVAKOVSKIY, A.O., retsenzent, redaktor; STRAMENTOV, A.Ye., retsenzent, redaktor; STRELETSKIY, N.S., retsenzent, redaktor;

(Continued on next card)

ANDREYEV, A.V.,(continued) .... Card 3.

TRET'YAKOV, A.P., retsenzent, redaktor; FAYERMAN, Ye.M., retsenzent, redaktor; KHACHATYROV, T.S., retsenzent, redaktor; CHERNOV, N.V., retsenzent, redaktor; SHERGIN, A.P., retsenzent, redaktor; SHESTOPAL, V.M., retsenzent, redaktor; SHESHKO, Ye.F., retsenzent, redaktor; SHCHAPOV, N.M., retsenzent, redaktor; YAKOBSON, M.O., retsenzent, redaktor; STEPANOV, Yu.A., Professor, redaktor; DEM'YANYUK, F.S., professor, redaktor; ZNAMENSKIY, A.A., inzhener, redaktor; PLAKSIN, I.N., redaktor; RUTOVSKIY, B.N. [deceased] doktor khimicheskikh nauk, professor, redaktor; SHUKHGAL'TER, L. Ya, kandidat tekhnicheskikh nauk, dotsent, redaktor; BRESTINA, B.S., redaktor; ZNAMENSKIY, A.A., redaktor.

(Continued on next card)

ANDREYEV, A.V. (continued) .... Card 4.

[Concise polytechnical dictionary] Kratkii politekhnicheskii slovar'. Redaktsionnyi sovet; IU.A.Stepanov i dr. Moskva, Gos. izd-vo tekhniko-teoret. lit-ry, 1955. 1136 p. (MLRA 8:12)

1. Chlen-korrespondent AN SSSR (for Plaksin)
(Technology--Dictionaries)

TSVID, A., kand.tekhn.nauk; LUTSENKO, I.; PIKHAY, G.; SAKHAROV, M.; ZLODEYEV, P.; DENISENKO, V.

We get word. Stroitel' no.7:7 Jl '61. (MIRA 14:8)
(Construction industry--Technological innovations)

ZLODYREV, V.V., kandidat tekhnicheskikh nauk

Use of metal formwork and reinforced concrete matrices in making floor panels for industrial buildings. Sbor. mat. o nov. tekh. v stroi. 17 no.4:16-20 '55. (MLRA 8:6)
(Floors, Concrete)

ZLODEYEVA, L.P., inzh.; KORSHUN, R.S., inzh.

Replacement of zinc coatings by AKhL-20 paint. Sudostroenie 25 no.8: 55 Ag '59. (MIRA 13:2)
(Shipbuilding--Supplies) (Pipe--Corrosion)

Catogory= : H-17

Abs. Jour. : 39690

Author : Hohnjec-Mihaljinac, S. and Zlof, B.
Institut. : Not given
Title : The Preparation of Glycerine-Based Suppositories

Orig. Pub. : Farmac Glasnik, 13, No 7-8, 327-333 (1957)

Abstract : 3 gms of Na stearate are dissolved in 97 gms glycerine at 115-120°, and the solution is poured into metal molds (80-90°, 1 hr); the contents of the molds are cooled gradually and high-grade transparent suppositories are obtained. The authors have investigated the solubility of the suppositories, the alkalinity of the solutions, their glycerine content, and the stearic acid and Na-ion content.

I. Matveyeva

Card: 1/1

H-73

ZLOF, Blanka

Development and production of aluminum tubes. Farmaceut gl Zagreb 20 no.3/4:129-139 Mr-Ap '64.

1. From the Institute of Pharmaceutical Technology of the Pharmaceutical Faculty, University of Zagreb.

BOGDANOVA, Anna Aleksandrovna; DOROSHKEVICH, Nina Orestovna; ZLOCHEVSKAYA, Khioniya Yefimovna; SAPUNOV, O.K., red.; TIKHONOVA, Ye.A., tekhn. red.

[English language for marine electricians] Angliiskii iazyk dlia sudovykh elektromekhanikov. Moskva, Izd-vo "Morskoi transport," 1962. 167 p. (MIRA 16:4)
(Electricity on ships)
(English language--Technical english)

ZLOCHEVSKAYA, R.I.

Study of the properties of the double electric bed of clay grounds. Vest. Mosk. un. Ser. 4: Geol. 20 no.3:65-74 My-Je '65. (MIRA 18:7)

1. Kafedra gruntovedeniya i inzhenernoy geologii Moskovskogo universiteta.

ZLOCHEVSKAYA, T. N.

LEPROSY

"Research on the Reactivity of the Organism of Lepers Who Have Been Treated with Sulfones", by T.N. Zlochevskaya, Sbornik Rabot Po Leprologii i Dermatologii; 1956, 7, pp 360-373 (from Meditsinskiy Referativnyy Zhurnal, Section 1, No 2, 1957, p 147.)

Pharmacodynamic and Frey's hairs tests were performed on 53 persons afflicted with nodular leprosy; their pilomotor reflexes dermographia, etc., were examined. Sulfonic compounds and preparations, mostly combined with chaulmoogrates, acted well upon the indicators which reflect the changes in the peripheral nervous system.

Card 1/1

GOMBERG, S. L. , ZLOCHEVSKIY, G. S.

Dust-Removal

Dust collecting valve for centralized dust collecting systems. Biul. stroi. tekh. 9 no. 6, 1952.
Inzh.; Giprogorstroyproyekt

Monthly List of Russian Accessions, Library of Congress, August 1952. UNCLASSIFIED.

ZLOCHEVSKIY, G. E.

Founding

Coreless casting ofhousing and lids for reduction gearing. Lit. proizv. No. 3, 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953. Unclassified.

ZLOCHEVSKIY, O.S. [Zlocheva'kyi, O.S.]

Reconditioning a fuel pump. Mekh. sil'. hosp. 13 no.4:25 Ap '62. (MIRA 17:3)

1. Zaveduyushchiy masterskoy Tarashchanskogo rayonnogo otdeleniya "Sil'gosptekhniki", Kiyevskoy oblasti.

ZLOCHEVSKIY, O.S. [Zlochevs'kyi, O.S.]

Strenghtening the conveyor of the SVT-2,1 beet loader. Mekh. sil'.hosp. 13 no.12:18 D '62. (MIRA 16:2)

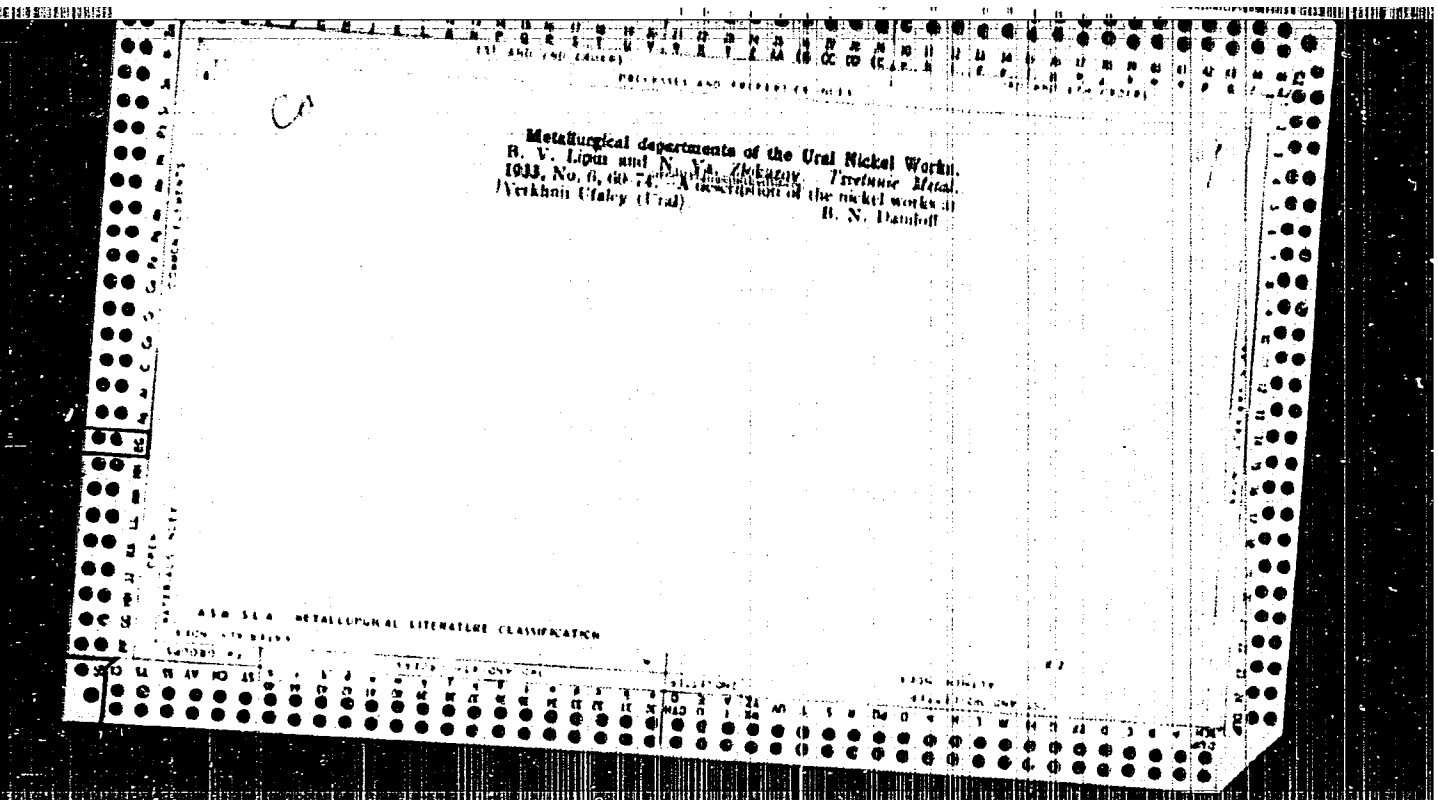
1. Zaviduyuchiy remontnoyu maysternoyu Tarashchans'kogo rayviddilennya "Sil'gosptekhniki" na Kiivshchini.
(Beets) (Loading and unloading)

ZLOCHEVSKIY, O. S.[Zlochevs'kyi, O. S.]

Repairing vacuum pumps. Mekh. sil'. nosp. 14 no.2:14-15 F '63. (MIRA 16:4)

1. Zaveduyushchiy remontnoy masterskoy Tereshchenskogo otdeleniya "Sil'gosptekhniki", Kiyevskoy oblasti.

(Milking machines—Maintenance and repair)



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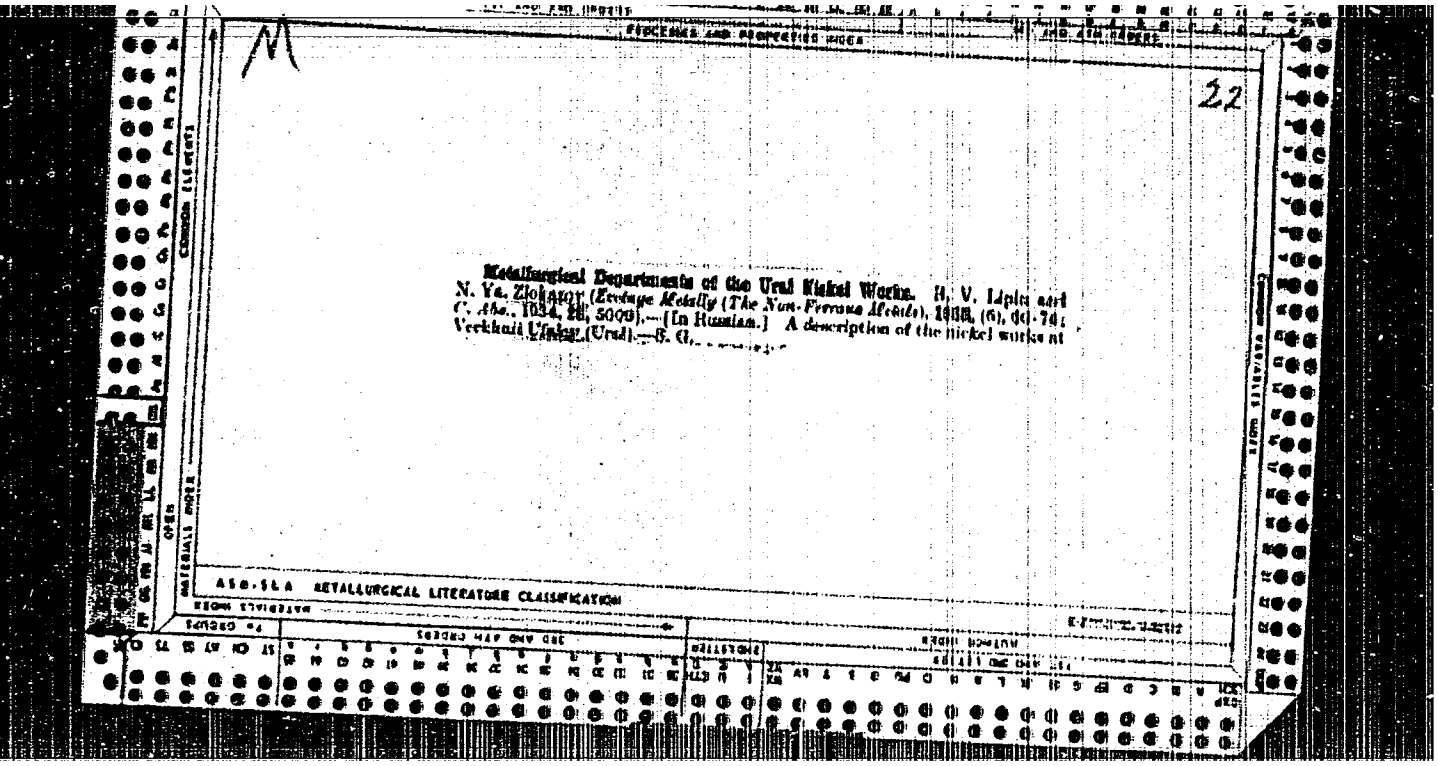
B. V. Lipin and N. Ya. Zhikarev. *Tsvetnye Metal.* 1933, No. 6, 69-74. A description of the nickel works at Verkhnii Ufaley (Ural).
B. N. Danilov



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Metallurgical Departments of the Ural Nickel Works. N. Ya. Zlobinov (*Tsvetnye Metally* (*The Non-Ferrous Metals*), 1933, (6), 66-74; *C. Abs.*, 1934, 28, 5009).—[In Russian.] A description of the nickel works at Verkhnii Ufaley (Ural).—G. G.

A 50-51 A METALLURGICAL LITERATURE CLASSIFICATION

BORUKHOVSKIY, A.; ZLOKAZOV, Yu.

Abide by the state discipline in the strictest way possible. Sots. trud 4 no.1:68-72 Ja '59. (MIRA 12:2)
(Russia--Economic policy)

ZLOKAZOV, Yu.

Issuing bonuses to workers of machine accounting department and machine accounting service centers operating on a business accounting basis. (MIRA 14:3)
Sots.trud 6 no.3:45-47 Mr '61.
(Bonus system) (Machine accounting)

ZLOKAZOV, Yu.

New development in the wages to the workers of consumers cooperatives. (MIRA 16:12)
Sots. trud 8 no.10:71-75 O '63.

GERMAN-GALKINA, A.S.; ZLOKAZOVA, T.M.; MEL'NIKOVA, V.P.; SIDORENKO, V.V.

Use of hydrocyclones in thickener units for the separation of solids in alumina-bearing sinters. TSvet. met. 34 no.1:52-54 Ja '61. (MIRA 17:3)

SILINA, Ye.I.; ZLOKAZOVA, T.M.; ZOLOTAREVA, M.G. Prinimali uchastiye: YEVTYUTOV, A.A.; LEVINA, P.I.; CHEMODANOV, V.S.; SVECHNIKOVA, L.I.; KRIVONISHCHENKO, V.V.

Experimental factory testing of polyacrylamide flocculent as a substitute for meal in the production of alumina. TSvet. met. 37 no.12:44-46 D '64 (MIRA 18:2)

1. Ural'skiy alyuminiyevyy zavod (for Yevtyutov, Levina, Chemodanov). 2. Ural'skiy nauchno-issledovatel'skiy i proyektnyy institut obogashcheniya i mekhanicheskoy obrabotki poleznykh iskopayemykh (for Svechnikova, Krivonishchenko).

CHERNYSHEVA, A.F.; MERKUSHEVA, L.A.; ZLOKAZOVA, V.M.; KOSTINA, G.M.

Economic and geographical study of small rivers in the Votkinsk Reservoir region for the purpose of developing transportation. Uch. zap. Perm. gos. un. 101:57-69'63 (MIRA 18:2)

ZLOKOVIC, Milan, ing., arh., prof.; ZLOKOVIC, Dorde, dr., ing., arh., asistent

Importance of modular coordination in the design and construction of buildings. Produktivnost 3 no.9:583-593 S '61.

1. Arhitektonski fakultet Univerziteta, Beograd.

SLOKOVIC, V.

"Problems of Electrification of Villages and Agriculture in Yugoslavia and Abroad." p. 124, Vol. 22, no. 3/4, 1954. Ljubljana

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ZLOKOVIC, V.

Report on problems of voltage regulation of three-phase generators without an automatic control as used with the prototype of the ST 1950 hydraulic turbine with no speed governor for rural electrification. p. 102. ZBORNIK RADOVA. Beograd. No. 37, 1954

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ZLOKOVIC, V.

Proposed national standard for the installation of electric fences in agriculture and forestry. p. 62. (STANDARDIZACIJA, No. 4, Apr, 1954, Beograd, Yugoslavia)

SO: Monthly list of East European Accessions, (EEAL), LC, Vol. 4, no. 1 Jan. 1955, Uncl.

ZLOKOVIC, V.

New electric and electronic procedures in industrial manufacture of foodstuffs. I. (To be contd.) p. 1183
Vol. 9, No. 8, 1954, TEHNIKA. Beograd, Yugoslavia.

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ZLOKOVIC, V.

Review of rural electrification in the USA, Great Britain, and Austria, p. 1551
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TEHNIKA, Beogard, Vol 10, No. 11, 1955

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ZLOKOVIC, V.

ZLOKOVIC, V. The proposal of new power prices rates for our agriculture. p. 646

Vol. 9, no. 11/12, Nov./Dec. 1956
ELEKTROPRIVERDA
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Beograd

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ZLOKOVIC, V.

New electric and electronic procedures in industrial manufacture of foodstuffs. II. p. 1342. Vol. 9, No. 9, 1954. TEHNIKA. Beograd, Yugoslavia.

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ZLOKOVIC, VLADIMIR

Agriculture

Rezultati primene elektricnih aparata za primamlijivanje, otkrivanje i unistavanje insekata. Beograd, Institut "Nikola Tesla," 1958.
55 p. (Belgrade. Institut za ispitivanje elektricnih pojava "Nikola Tesla." Posebno izdanje, sv.6)
(Results of the application of electric light traps in enticing, detecting, and destroying insects. English summary, illus., bibl., graphs, tables)

Monthly List of East European Accessions (EEAI), LC, Vol. 8, No.4
April 1959, Unclass.

ZLOKOVIC, Vladimir, ing.

Application of electric heat pumps in agriculture. Elektroprivreda 14 no.7/8:370-374 Jl-Ag '61.

1. Institut "Nikola Tesla", Beograd.

ZLOKOVIC, Vladimir, ing.

International conference of the Working Group for the Electrification of Villages and Agriculture in Geneva. Elektroprivreda 14 no.10: 537-539 O '61.

ZLOKOVIC, Vladimir, inz., visi naucni suradnik

Possibility of using the electric heating pump for agricultural purposes. Energija Hrv 11 no.11/12:374-380 '62.

1. Institut "Nikola Tesla", Beograd, Cetinjska ulica br. 8.

ZLOKOVIC, V., inz.

The Yugoslav Center for Agricultural and Rural Electrification.
Elektroprivreda 15 no.2/3:113-114 F-Mr '62.

ZLOKOVIC, Vladimir, inz.

The seminar "Electric power in agriculture" in Slovenia.
Elektroprivreda 15 no.4:179-181 Ap '62.

ZLOKOVIC, Vladimir, inž.

Principles and methods in planning electrification of agriculture in the U.S.S.R. Elektroprivreda 16 no.2:105-110 Fe '63.

ZLOKOVIC, Vladimir, inz.

First Symposium on Rationalization of Electric Power Consumption. Elektroprivreda 16 no.8:386-387 Ag '63.

ZLOKOVIC, Vladimir (Beograd)

Founding of a Yugoslav center for the electrification of agriculture and villages. Elektr vest 30 no.1/2:42-43 '62/'63.

ZLOKOVIC, Vladimir, dipl. inz.

Some experiences in regulating the consumption of electric power in Czechoslovakia. Energija Hrv 13 no. 1/2:46-49 '64.

ZLOKOVIC, Vladimir, dipl. inz.

Organization of state control of electric power consumption in the U.S.S.R. Energija Hrv 13 no.5/6:180-181 '64

ZLOKOVIC, Vladimir, inz.

International Conference of the Working Group for the Study of Rural and Agricultural Electrification in Geneva. Tehnika Jug 19 no. 2:Suppl.:Elektrotehnika 13 no. 2:322-324 F '64.

ZLOKOVIC, V., inz.

Consulation on the rationalization of e'ectric power consumption.
Elektroprivreda 17 no.7/8:355 Jl-Ag '64.

ZLOKOVIC, Vladimir, inz.

Use of electric energy for supplementary heating of the beds and greenhouses under milder climatic conditions. Elektroprivreda 17 no. 1: 32-40 Ja '64.

ZLOKOZOV, V.N.

Biological foundations of the regulation of whitefish catches in the Ob' Basin. Trudy sov. Ikht. kom. no.13:433-436 '61. (MIRA 14:8)

1. Novosibirskoye otdeleniye Gosudarstvennogo nauchno-issledovatel'skogo instituta ozernogo i rechnogo rybnogo khozyaystva-GosNIORKh.

(Ob' River—Whitefishes)
(Fishery law and legislation)

ZLOMANOV, L., ekonomist

Make better use of peat. Nauka i perod. op. v sel'khoz. 8 no.4:36 Ap '58. (MIRA 11:5)

1.Moskovskiy institut mekhanizatsii i elektrifikatsii sel'skogo khozyaystva.

(Peat)

ZLOMANOW, L.

Work practice of the tractor brigade of a collective farm. Kop. skon. no.3:67-73 Mr '58. (MIRA 11:4)
(Collective farms) (Machine-tractor stations)

ZLOMANOV, L.P., prepodavatel'

Indices of labor productivity for collective farm machinery operators. Trudy MIMESKH 5 no.1:109-121 '58. (MIRA 13:10)

1. Kafedra politicheskoy ekonomii Moskovskog instituta mekhanizatsii i elektrifikatsii sel'skogo khozyaystva.
(Collective farms--Labor productivity)
(Repair and supply stations)

ZLOMANOV, L.

Development of industrial production on collective farms. Vop. ekon. no.12:122-125 D '58. (MIRA 11:12)
(Collective farms) (Russia--Manufactures)

ZLOMANOV, L.P., kand.ekon.nauk

Characteristics of labor process and growth conditions of labor productivity on collective farms. Trudy MIMEZKH 11:123-147 '60. (MIRA 13:9)

(Collective farms--Labor productivity)

ZLOMANOV, L.; YAKHNICH, A.

On the utilization of the labor force in agriculture. Vop. ekon. no.4:141-146 Ap '61. (MIRA 14:3)
(Agricultural laborers)

VDOVICHENKO, N.Kh.; DMITRASHKO, I.I., kand. tekhn. nauk; ZHELUDKOV, A.P.; ZLOMANOV, L.P.; KALPIN, G.Z.; NIZHNYY, N.I.; NIKITINA, M.V.; ROMANENKO, I.N.; BUDARINA, V., red.; USTINOV, M., red.; KIRSANOVA, I., mladshiy red.; NOGINA, N., tekhn. red.

[Agricultural wages in the U.S.S.R.] Oplata truda v sel'skom khoziaistve SSSR. [By] Vdovichenko, N.Kh. i dr. Moskva, Sotsekgiz, 1962. 147 p. (MIRA 15:6)
(Agricultural wages)

ZLOMANOV, Leonid Pavlovich, kand. ekonom. nauk; DUBROVSKIY, Yu.N., red.; TOVMOSYAN, M.Ye., red.; HAZAROVA, A.S., tekhn. red.

[Economic relations between city and village during the large-scale building of communism] Ekonomicheskie sviazi goroda i derevni v period razvernutogo stroitel'stva kommunizma. Moskva, Izd-vo "Znanie," 1962. 44 p. (Novoe v zhizni, nauki, tekhnike. III Seriia: Ekonomika, no.1) (MIRA 15:4)
(Agricultural policy)

AKIYAMA, Kh. [Akiyama, Hiroshi]; GUSEV, M.A. [translator]; ZLOMANOV, V.A. [translator]; RYABKIN, A.G. [translator]; TULINOV, N.N. [translator]; SMIRNOV, P.I., red.; KHOMYAKOV, A.D., tekhn.red.

[Special detachment 731] Osobyi otriad 731. Moskva, Izd-vo inostr.lit-ry, 1958. 151 p. Translated from the Japanese. (MIRA 12:8)

(Manchuria--Bacteriological warfare)

PASHKOVSKIY, A.A.; ROZHNTSKIN, A.M.; ZLOMANOV, V.A., spets.red.; TULINOV, N.N., red.; KUROCHKIN, V.D., red.; DANILOVA, Z.S., red.-leksikograf; BUSHYUK, N.I., red.-leksikograf; ANIKINA, R.F., tekhn.red.

[Japanese-Russian military dictionary] Voennyi iaponsko-russkii slovar'. Okolo 20000 slov i slovosochetanii. S prilozheniem stat'i "IAponskaia voennaia leksika" A.A.Pashkovskogo. Moskva, Voen.izd-vo M-va obor.SSSR, 1959. 552 p. (MIRA 13:1)

(Japanese language--Dictionaries--Russian)
(Military art and science--Dictionaries)

EL'YANOV, David Iosifovich; MOROZOVSKIY, N.G., kontr-admiral, red.;
ZLOMANOV, V.A., podpolkovnik, red.; SAVIN, B.V., red.-leksikograf;
KUZ'MIN, I.P., tekhn.red.

[Anglo-Russian and Russo-English dictionary of naval commands]
Anglo-russkii i russko-angliiskii slovar' voenno-morskikh komand.
Pod red. N.G.Morozovskogo. Moskva, Voen.izd-vo M-va obor.SSSR,
1960. 190 p. (MIRA 13:5)
(English language--Dictionaries--Russian)
(Russian language--Dictionaries--English)
(Naval art and science--Dictionaries)

KHAYASI, K.[Hayashi, K.]; ANDO, T., prof.; KIMURA, K.; ZLOBANOV, V.A., [translator]; ZORIN, A.Ye.[translator]; LEVIN, L.Z. [translator]; PASHKOVSKIY, A.A.[translator]; SHIRNOV, P.I., red.; BUKOVSKAYA, N.A., tekhn. red.

[Ordnance rockets and Japan; military bases are a war threat] Raketnoe orushie i IAponiia; voennye bazy - ugroza miru. Vstup. stat'ia i kommentarii B.G.Sapozhnikova. Moskva, Voen. izd-vo M-va oborony SSSR, 1961. 246 p. Abridged translation from the Japanese. (MIRA 15:2)

1. Tokiyskiy universitet (for Ando).
(Japan--Rockets (Ordnance))

SPAZHEV, Yu.A.; FILIPPOV, A.A; ZLOMANOV, V.A., podpolkovnik, red.;
SOKOLOVA, G.F., tekhn. red.

[Translation of military terminology; the English language]
Kurs voennogo perevoda; angliiskii iazyk. Moskva, Voen. izd-vo
M-va obor. SSSR. Pt.1. 1962. 505 p. ___ Supplement. 15 p.
(MIRA 15:3)

(English language—Translating)
(Military art and science—Terminology)

AUTHORS: Zlomanov, V.P., Novoselova, A.V., SOV/78-3-7-1/44
Pashinkin, A.S., Simanov, Yu.P., Semenenko, K.N.

TITLE: Determination of the Pressure of Steam Saturated With Solid Tellurium Dioxide (Opredeleniye davleniya nasyshchennogo para tverdoy dvuokisi tellura)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol 3, Nr 7, pp 1473-1477 (USSR)

ABSTRACT: The pressure of steam saturated with solid tellurium dioxide was determined in the temperature interval of 457-704° C by means of a radioactive tellurium isotope. The phase composition of tellurium dioxide was determined, for which purpose thermograms for the temperature interval of 25-800° C, as well as heating- and cooling diagrams were made. X-ray analyses showed that the crystal lattice of tellurium dioxide is tetragonal and has the following parameters: a = 4,796, c = 7,588 kX.
On the strength of the results obtained by thermographical and radiographical analyses it follows that the solid phase of the vaporous tellurium dioxide shows tetragonal modifications. There are 3 figures, 2 tables, and 16 references, 9 of which are Soviet.

Card 1/2

Determination of the Pressure of Steam Saturated With Solid Tellurium Dioxide SOV/ 78-3-7-1/44

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M.V.Lomonosova (Moscow State University imeni M.V.Lomonosov)

SUBMITTED: July 8, 1957

1. Steam--Pressure 2. Pressure--Determination 3. Tellurium dioxide--Phase studies 4. Tellurium isotopes--Applications 5. X-rays--Applications

Card 2/2

66294
SOV/78-4-12-2/35

AUTHORS: ~~5(2), 5(4)~~ 5.4210(A) Zlomanov, V. P., Popovkin, B. A., Novoselova, A. V.

TITLE: Measurement of the Pressure of Saturated Vapor of Solid Lead Selenide

PERIODICAL: Zhurnal neorganicheskoy khimii, 1959, Vol 4, Nr 12, pp 2661-2664 (USSR)

ABSTRACT: Photoelectrically active PbSe films were produced by vacuum evaporation of PbSe and subsequent heating in an atmosphere of low oxygen pressure (Ref 2). For this procedure it is essential to know the vapor pressure of PbSe at different temperatures. The authors made this investigation within the temperature range 501-668°C. The PbSe was obtained by fusion of the two components in stoichiometric ratio. Analysis and X-ray pictures confirmed the degree of purity of the resulting compound. It was further shown that PbSe is identical with its sublimate (Table 1). The pressure of the saturated vapor was measured (Table 2) by a method earlier described (Ref 10). Vapor pressure measurement was also made according to Knudsen within the temperature range 641-718° (Table 4). The opening of the effusion chamber was gauged (Table 3) by means of potassium chloride evaporation according to data published by A. N.

Card 1/2

Measurement of the Pressure of Saturated Vapor of Solid Lead Selenide

Nesmeyanov and L. A. Sazonov (Ref 11). The vapor pressure of PbSe follows the equation:

$$\log p\,[\text{torr}] = -\frac{11032}{T} + 10.084.$$

The sublimation heat ΔH_T was 50.47 kcal/mol. There are 1 figure, 4 tables, and 11 references, 5 of which are Soviet.

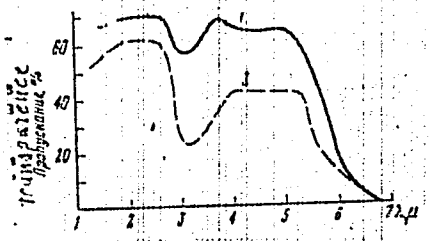
SUBMITTED: September 16, 1958

Card 2/2

Vitrification in the TeO_2 - Al_2O_3 System

S/078/60/005/007/043/043/XX
B004/B060

0 - 15% Al_2O_3 were melted in porcelain crucibles at 750 - 800°C. Non-crystallizing glasses were obtained only at TeO_2 concentrations between 90 and 94% (Table 2). The high specific gravity (6 g/cm^3) is pointed out as a drawback. The diathermancy is illustrated in a figure.



Absorption at 3.2μ is caused by moistness absorbed on the surface. The absorption curve was recorded by an IKS-11 (IKS-11) infrared spectroscopic apparatus. There are 1 figure, 2 tables, and 8 references: 2 Soviet, 1 US, and 5 British.

Card 2/3

Vitrification in the TeO_2 - Al_2O_3 System

S/078/60/005/007/043/043/XX
B004/B060

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: January 28, 1960

Legend to the figure: Absorption curve of glasses in the infrared range of the spectrum (thickness of specimens 2 mm), 1) glass with 6% Al_2O_3 and 94% TeO_2 from alundum crucible, 2) glass of same composition but melted in porcelain crucible.

Card 3/3

85606

S/078/60/005/010/026/030/XX
B017/B067

26.2420

AUTHORS: Popovkin, B. A., Zlomanov, V. P., and Noroselova, A. V.

TITLE: Study of the Thermal Decomposition of Lead Selenate and Lead Selenite

PERIODICAL: Zhurnal neorganicheskoy khimii, 1960, Vol. 5, No. 10, pp. 2261-2264

TEXT: In the present paper, the authors studied the thermal decomposition of lead selenite and lead selenate by means of thermogravimetric and thermographic methods of analysis. The phases obtained on the thermal decomposition were examined by chemical analysis and by X-ray phase analysis. The interplanar spacings (d) and the relative lines of intensity of the X-ray pictures of lead selenite and lead selenate are given. The thermal stability of lead selenate and lead selenite was examined by continuous photography. The thermograms of lead selenite showed that it melts at 675°C under decomposition. When this compound melts, selenium dioxide vapors are formed. Two endothermic effects at 645 and 715°C were observed on the thermograms of lead selenate. The first thermal effect at 645°C

Card 1/2

Study of the Thermal Decomposition of Lead Selenate and Lead Selenite

S/078/60/005/010/026/030/XX
B017/B067

corresponds to the monotropic, polymorphous transformation of lead selenate. The endothermic effect at 715°C indicates the melting point of lead selenate. Lead selenate melts under decomposition. Table 4 shows the phase composition of the products which formed on thermal decomposition. The decomposition products of lead selenate and lead selenite contain two phases which were studied by X-ray photographic methods. The lattice of the first phase A is tetragonally body-centered with the following parameters: $a = 3.92 \pm 0.01$ A, $c = 5.37 \pm 0.01$ A; the lattice of phase B is rhombically body-centered and has the following parameters: $a = 3.92 \pm 0.01$ A, $b = 3.73 \pm 0.01$ A, and $c = 5.72 \pm 0.01$ A. There are 3 figures, 4 tables, and 9 references: 4 Soviet, 1 US, 3 French, and 1 German.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: July 9, 1959

2434

S/078/61/006/007/012/014
B121/B207

5 2400

AUTHORS: Zlomanov, V. P., Muratova, G. V., and Novoselova, A. V.

TITLE: The production of lead selenide

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 6, no. 7, 1961, 1730 - 1731

TEXT: The production of lead selenide by reducing lead selenite with hydrogen and reacting PbO with Se and Pb with SeO_2 was studied. The lead selenite used was prepared by mixing equivalent amounts of hot selenous acid solution and lead nitrate. Lead selenite is noticeably reduced with hydrogen at 300 - 350°C, at 420°C $PbSeO_3$ exists besides PbSe, at a temperature of 500 - 600°C, the reaction product consists entirely of PbSe. At a reduction above 600°C, the reaction products decompose under the formation of selenium and metallic lead. The method suggested allows the production of PbSe without application of the toxic hydrogen selenide, using high-purity initial materials. The optimum reduction temperature for lead

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S/079/61/006/007/012/014
B121/B207

The production of lead selenide

selenite with hydrogen is 600°C. Synthesis of lead selenide from a mixture of 4.23 g Pb and 1.5 g SeO_2, as well as a mixture of 4.3[illegible] g PbO and 1.00 g Se at 600°C in sealed quartz ampouls during 10 hr leads to the formation of PbSe and oxyselenite 2 $PbO.PbSeO_3$. The reaction takes the following course: $3\ PbO + 3\ Se \longrightarrow 2\ PbSe + PbSeO_3$

$3\ Pb + 3\ SeO_2 \longrightarrow PbSe + 2\ PbSeO_3$

There are 1 table and 11 references: 7 Soviet-bloc and 4 non-Soviet-bloc. The 4 references to English language publications read as follows: Lawson, J. Appl. Phys., 4, 495 (1951) W. Benzing, J. Amer. Chem. Soc., 80, 2657 (1958) H. Willman, Proc. Phys. Soc., 60, 117 (1948) C. I. Milner, Nature, 163, 322 (1949)

ASSOCIATION: Moskowskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: January 30, 1961

Card 2/2

ZLOMANOV, V.P.; POPOVKIN, B.A.; TAMANAYEVA, O.I.; NOVOSELOVA, A.V.

Some properties of lead selenite and oxyselenites. Zhur.neorg. khim. 7 no.12:2746-2751 D '62. (MIRA 16:2)

1. Moskovskiy gosudarstvennyy universitet imeni Lomonosova.
(Lead selenite)

30181
S/078/61/006/012/007/011
B124/B110

S2200

AUTHORS: Zlomanov, V. P., Tananayeva, O. I., Novoselova, A. V.

TITLE: Study of the interaction between lead selenide and oxygen

PERIODICAL: Zhurnal neorganicheskoy khimii, v. 6, no. 12, 1961, 2753-2757

TEXT: Continuing an earlier study performed by the authors (Ref. 3: Dokl. AN SSSR 129, 809 (1959)), the composition of the oxidation products prepared by reacting lead selenide with oxygen at temperatures ranging from 500 up to 900°C was established, and the electrical conductivity of the respective products measured. Lead selenide was oxidized in alundum crucibles in the furnace TT-2 (TG-2) the temperature of which was controlled with the potentiometer EPD-12 (EPD-12). Products obtained were examined by chemical and x-ray techniques. From the results of the two methods, it is obvious that at 500 to 600°C lead selenite forms, while at 600 to 800°C the phase A appears which has not yet been described in literature, in addition to the selenite; this phase is the only reaction product on heating in the air for 2 hours, at 800°C. Evidence is given for the fact that the oxyselenite $2PbO \cdot PbSeO_3$ is concerned here which is based

Card 1/3

Study of the interaction...

S/078/61/006/012/007/011
B124/B110

on the consistent densities established by pycnometric and x-ray measurements as well as on the identical powder diagrams of oxyselenite synthetically prepared and of the sample. Oxyselenite has a tetragonal body-centered lattice with the parameters a = 3.91 ± 0.01 kX; c = 5.37 ± 0.01 kX. Oxyselenite melts incongruently; the liquid phase appears first at 705 ± 10°C and the bulk of the oxyselenite melts at 740 ± 10°C. $4PbO \cdot PbSeO_3$ forms in the air at 900°C after 2 hours and was also prepared by the oxidation of lead selenide in the air at 1000°C for 1 hour. The parameters of the rhombic body-centered lattice of $4PbO \cdot PbSeO_3$ are: a = 3.90 ± 0.01 kX; b = 3.71 ± 0.01 kX; c = 5.67 ± 0.01 kX. This compound is identical to the phase B described in earlier papers (Ref. 3: see above; Ref. 11: Zh. neorgan. khimii 6, 2261 (1960)) which melts congruently at 780°C. The conductivity of lead selenide oxidized at temperatures above 600°C was measured with a small-size ohmmeter (MOM-3 (MOM-3)) and was $2 \cdot 10^{-8}$ to $2 \cdot 10^{-10}$ $ohm^{-1}cm^{-1}$. V. I. Mikheyev (Ref. 9: Rentgenometricheskiy opredelitel' mineralov (X-ray analyzer for minerals), Gosgeoltekhizdat, 1957, p. 95) is mentioned. Thanks are given to L. M. Kovba for the performance of the x-ray examinations. There are 1 figure, 4 tables, and

Card 2/3

Study of the interaction... 30161

S/078/61/006/012/007/011
B124/B110

16 references: 12 Soviet and 4 non-Soviet. The three references to English-language publications read as follows: F. N. Pollard, P. Hanson, W. I. Gedry, Ann. Chem. Acta 20, 26 (1959); D. H. Roberts, J. Electron. and Control 5, 256 (1958); H. Pagel, I. Miers, Ind. Eng. Chem. Anal. Ed. 10, 334 (1938).

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: October 12, 1960

Card 3/3

S/020/62/143/001/020/030
B106/B138

AUTHORS: Zlomanov, V. P., and Novoselova, A. V., Corresponding Member of the AS USSR

TITLE: Study of the reaction of lead selenide with oxygen

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 1, 1962, 115 - 18

TEXT: Kinetics of the reaction are studied in the range 122 to 496°C. The composition of the reaction products was ascertained by X-rays. Surface and specific resistance of the lead selenide samples prior to and after oxidation were determined. The subtly pulverized samples were produced from monocrystalline lead selenide synthesized by the vibration method and subsequently vacuum sublimed. The surface of the samples was determined by adsorption measurements, the BET formula being used. When assuming that the pulverized sample consisted of cubes with edge x, the most probable value $x \cong 2 - 3\mu$ (also confirmed by electron-microscope observations), was obtained from the values of the surface and from value $d = 8.30$ g/cm³ of the density of lead selenide (Ref. 6: see below). The measuring device for investigating the kinetics of the reaction of lead

Card 1/4

Study of the reaction of lead...

selenide with oxygen consisted of a microbeam balance constructed by G. G. Muttik (Ref. 7: ZhFKh, 31, 263 (1957)) (sensitivity $2 \cdot 10^{-5}$g, load = 10 g, temperature coefficient $< 2 \cdot 10^{-5}$g per 1°C), a high-vacuum plant ($2 \cdot 10^{-5}$–$6 \cdot 10^{-6}$ mm Hg, BH-461 (VN-461) and VM-40A (MM-40A)) pumps of a plant for purifying oxygen, containers for O_2, Kr, He, Ar (He and Ar served to heat the sample in inert atmosphere), an electric T-02 (TG-02) furnace, and apparatus for potentiometric temperature control (potentiometer P-307 (R-307)), and regulation of heating (EPV-01 (EPV-01) potentiometer). Oxygen pressure in all experiments was 150 ± 1 mm Hg. The results obtained are shown in Table 1 and Fig. 1. The initial rate of the reaction of lead selenide with oxygen follows the equation $(\Delta m)^2 = kt$ (Δm = variation of the amount of absorbed oxygen with the time t). ΔE = 15 kcal/degree·mol for the activation energy was obtained from the temperature dependence of the rate constant k. In the X-ray analysis, the samples were exposed to CoK and CuK_α radiations in RKU-86 (RKU-86) and RKD-57 (RKD-57) cameras with asymmetrically inserted films. The main product of the oxidation of lead selenide with oxygen in the temperature range investigated is lead selenite $PbSeO_3$. The lattice parameter a = 6.114 ± 0.001 kX of PbSe did

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not vary in the oxidation within the error limits. This constancy contradicts the results in Ref. 9 (see below). The linear rise of the initial parts of the kinetic curves (Fig. 1) is associated with the oxygen diffusion in anion vacancies accompanied by the development of an oxide phase. Lead selenite is formed both before and after the date corresponding to the discontinuation in the kinetic curves. The oxidized part of PbSe at the time of the discontinuation is 0.07% (122°C), 2.01% (275°C), 3.6% (317°C), and 13.6% (496°C). The break is assumed to correspond to the formation of an oxide film which is sufficiently thick to have a protecting effect and to decrease the oxidation rate sharply at the relevant temperature. The greatest thickness of the oxide film has values of approximately 4 Å (122°C), 150 Å (275°C), 170 Å (317°C), and 700 Å (496°C). The film covers the PbSe surface completely. The PbSe oxidation is associated with an increase in the compact surface layers of $PbSeO_3$ which are fixed by the PbSe layer lying below. The course of the kinetic curves after the break corresponds to a noticeable decrease of the oxidation rate caused by the growth of the oxide phase, the surface decrease, and the occurrence of mechanical defects. In this case, the kinetics of the oxidation can not be described unambiguously.

The decrease of the electric conductivity in the reaction of PbSe with oxygen, occurring at all temperatures investigated except 122°C (Table 1), corresponds to the increase in the amount of lead selenite in the sample. The authors thank G. G. Muttik for assistance in the construction of the microbalance. There are 1 figure, 2 tables, and 13 references: 9 Soviet and 4 non-Soviet. The four references to English-language publications read as follows: J. F. Miller, R. C. Himes, J. Electrochem. Soc., 107, No 11, 915 (1960); R. H. Jones, Proc. Phys. Soc., 70B, 704 (1957); Ref. 9: R. H. Jones, Proc. Phys. Soc., 70B, 1025 (1957); R. A. Beeb et al. J. Am. Chem. Soc. 67, 1554 (1945).

ASSOCIATION: Moskovskiy gosudarstvennyy universitet im. M. V. Lomonosova (Moscow State University imeni M. V. Lomonosov)

SUBMITTED: December 7, 1961

Table 1. Results of the reaction $PbSe+O_2$.

Legend: (1) Prior to oxidation; (2) after oxidation; (3) weighed portion, g; (4) variation of weight at degasification, in % of the initial

Card 4/7

CHEREMISINOV, V.P.; ZLOMANOV, V.P.

Structure and vibrational spectra of crystalline and glasslike tellurium dioxide. Opt. i spektr. 12 no.2:208-214 F '62. (MIRA 15:2)

(Tellurium oxide--Spectra)
(Raman effect)

KOSCIALKOWSKI, Wladyslaw; UBRANSKI, Zenon; ZLOMSKI, Zenon; DANILUK, Wlodzimierz
(Warsaw)

Mutual interdependence of the human factor and mechanisms in the origin of causes of building accidents. Przegl budowl i bud mieszk 27 [i.e. 37] no.3:148-154 Mr '65.

ZLONKIEWICZ, Stanislaw

On the application of the Cracovian root to the orthogonalization and normalization of sequences of functions. Archiw mech 14 no.6:901-904 '62.

1. Technical University, Krakow.

L 18924-63 EWT(d)/FCC(w)/BDS AFFTC/ASD/IJP(C)
P/0006/63/011/002/0235/0252
55
54

ACCESSION NR: AP3001688

AUTHOR: Zlonkiewicz, Stanislaw (Krakow)

TITLE: Cracovian method for solution of equations of motion of dynamic systems

SOURCE: Rozprawy inzynierskie, v. 11, no. 2, 1963, 235-252

TOPIC TAGS: Lagrange equation, eigenvector, eigenvalue, Cracovian calculus, matrix algebra

ABSTRACT: Author considers the application of Cracovian calculus to the integration of Lagrange equations of motion. This calculus gives a great simplicity and lucidity to well known discussions and computing methods. Eibenvectors and eigenvalues of a Cracovian are first analyzed, their eigenvectors and characteristic equations are given: similar motions are introduced as those used in matrix algebra. Five basic theorems are formulated in this connection. The symmetrical Cracovian is discussed in greater detail. The iterative method of determining eigenfunctions and eigenvectors is given, the simplicity of the method being clearly shown. In the second part of the paper the Lagrange equations of dynamic

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L 18924-63

ACCESSION NR: AP3001688

systems in the vicinity of the point of stable equilibrium are analyzed. A free conservative system is taken for which the Lagrange equations are replaced with a Cracovian differential equation of the second order whose solution may be reduced to determining eigenvectors of a certain Cracovian. The properties of these solutions are expressed by three theorems. The obtained results are extended to the case of a conservative system subject to forced oscillations. The case describes a Cracovian linear equation of the second order. For its solution, methods of Cracovian root may be successfully employed, as well as a method suggested by the author, very simple from the computational viewpoint. Finally, a free dissipative system is analyzed. It is described by a first order linear differential equation with coefficients of block Cracovians. Its solution may be reduced to the determination of eigenvectors of a certain Cracovian. The orig. art. has: 77 equations.

ASSOCIATION: Akademiya Gorniczo-Hutnicza, Krakow (Mining and Metallurgical Academy)

SUBMITTED: 04Dec62 DATE ACQ: 31May63 ENCL: 00

SUB CODE: MM NO REF SOV: 000 OTHER: 007

Card 2/2

KRETOV, A.Ye.; ABRAZHANOVA, Ye.A.; ZLOTCHENKO, S.I.

Production of hemichloronitroso hydrocarbons. Zhur.ob.khim. 31 no.12:4043-4044 D '61. (MIRA 15:2)
(Hydrocarbons)
(Nitroso compounds)

KRETOV, A.Ye.; ABRAZHANOVA, Ye.A.; ZLOTCHENKO, S.I.; KUKHAR', V.P.

Arene sulfamido ketones. Zhur.ob.khim. 33 no.7:2355-2357 Jl '63. (MIRA 16:8)

(Acetophenone) (Sulfamide)

ROVINSKIY, M.S.; KRETOV, A.Ye.; ZLOTCHENKO, S.I.

Determination of technical thiourea by the method of amperometric titration. Zav.lab. 29 no.2:154-156 '63. (MIRA 16:5)

1. Dnepropetrovskiy khimiko-tekhnologicheskiy institut.
(Urea) (Conductometric analysis)

22281

S/152/61/000/004/002/009
B126/B219

11.1210

AUTHORS: Panchenkov, G. M., Bazilevich, V. V., Boyeva, R. S., Zlotchenko, V. N., Nikolov, N. I.

TITLE: Investigation of the influence of the catalyst composition on the hydrocarbon content of gasolines from catalytic cracking

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Neft' i gaz, no. 4, 1961, 57-62

TEXT: The above investigation was carried out in view of the growing importance of petroleum as a raw material for chemical synthesis. The combined method of B. A. Kazanskiy and G. S. Landsberg for detailed examination of gasolines served as a basis, (Ref.3: Landsberg G. S., Kazanskiy B. A., Bazhulin P. A., Bulanova T. F., Liberman A. L., Mikhaylova Ye. A., Plate A. F., Sterin Kh. Ye., Sushchinskiy M. M., Tarasova G. A., Ukholin S. A. "Opredeleniye individual'nogo uglevodorod-nogo sostava benzinov pryamoy gonki kombinirovannym metodom" ("Determination of the individual hydrocarbon content in straight-run gasolines by a

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Investigation of the influence...

combined method"), Izd-vo AN SSSR, 1959; Ref. 4: Landsberg G. S., Bazhulin P. A., Sushchinskiy M. M. "Osnovnyye parametry spektrov kombinatsionnogo rasseyaniya uglevodorodov" ("Basic parameters of the spectra of Raman scattering from hydrocarbons"), Izd-vo AN SSSR, 1956). A distillate with a boiling interval at 300-400°C was used as initial raw material. Cracking was brought about in the laboratory at a temperature of 475°C and a feed rate of the raw material of 0.7 ml/hr, and lasted for 1 hr. The experiment was carried out under the same conditions in two equal apparatuses with aluminum silicate catalysts of various Al_2O_3 content, viz. a commercial aluminum silicate catalyst consisting of 12.8% Al_2O_3, 85.1% SiO_2, 0.2% Fe_2O_3, 0.05% Cr_2O_3, and a synthetic aluminum silicate catalyst with 30% Al_2O_3 and 70% SiO_2. The fractions 55-95 and 95-122°C were subjected to chromatographic adsorption, the losses being far less through use of the method of A. V. Topchiyev and collaborators (Ref. 5: "Khimiya i tekhnologiya topliva i masel", no. 11, 1957). In the determination of the individual composition of the narrow-band fractions, the method of the Raman spectra was used. The results of the investigation showed that the catalyst with the higher Al_2O_3 content

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has a greater isomerizing effect. The dehydrogenating effect of this catalyst is greater too. The catalyst with Al_2O_3 and Cr_2O_3 content has a greater cyclization effect. With this catalyst, gasoline with a higher aromatic and naphthenic hydrocarbon content was obtained. There are 6 tables and 7 references: 5 Soviet-bloc and 2 non-Soviet-bloc. The two references to English language publications read as follows: Molpolder F. W., Brown P. A., Young W. S., and Headington C. E., Ind.Eng.Chem., 44, 1142, 1952; Cady W. E., Marsehner R. F., Cropper W.P., Ind.Eng.Chem., 44, 1850, 1952.

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(EYE) (SHOCK THERAPY) (ACETYLCHOLINE)
(ATROPINE) (MILK)

ZLOTIN, slushatel'; KHUSAINOV, slushatel'; KUKLINSKIY, slushatel'; KISELEV, slushatel'; FEDOROV, slushatel'; AKHMOZOV, slushatel'; KHYZHANOVSKAYA, slushatel'; VALIKOV, slushatel'.

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